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Research Article

New species, new geographical records and taxonomical notes on North and Central American Cerambycidae and Disteniidae (Coleoptera, Chrysomeloidea)

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Abstract

Elytrimitatrix (*Grossifemora*) *pubescens* Santos-Silva & Hovore, 2008 (Disteniidae) is redescribed based on three males, morphological and chromatic variation in the species is reported. The unknown female of *Neocompsa flavoquadripunctata* Botero & Santos-Silva, 2022 is shortly described and a new Mexican state record is provided. The absence of the paratype of *Nealcidion bruchi* (Melzer, 1934) in the MZSP collection (see acronym below) is reported, and the date of description of the species is commented. *Alphinellus* Bates, 1881 is transferred from Acanthocinini to Desmiphorini. *Alphinellus minimus* Bates, 1881 is recorded for the first time from the Mexican state of Campeche and from Guatemala. Three new species are described: *Psyrassa peninsularis* **sp. nov.** (Cerambycidae, Cerambycinae, Elaphidiini) from Mexico (Quintana Roo); *Pseudastylopsis skillmani* **sp. nov.** (Cerambycidae, Lamiinae, Acanthocinini), from Guatemala; and *Eranina amaura* **sp. nov.** (Cerambycidae, Lamiinae, Hemilophini), from Guatemala.

Key Words

Biodiversity, Cerambycinae, Lamiinae, Longhorned beetles, Neotropical region, taxonomy

Introduction

The Cerambycidae and Disteniidae fauna of Mexico and Central America has been extensively studied, especially since the 19th century (e.g. Linsley 1935; Chemsak and Noguera 1995; Noguera et al. 2007; Heffern and Santos-Silva 2016; Pérez-Flores et al. 2022). Even so, the number of species that have not been described has exceeded all expectations of researchers working with the group.

Regarding Disteniidae, *Distenia* Lepeletier & Audinet-Serville, 1828 and *Elytrimitatrix* Hovore & Santos-Silva, 2007 are the genera of Disteniini (or Disteniinae depending of the opinion of the author when Disteniidae is considered a different family from Cerambycidae) with the highest number of described species (Tavakilian and Chevillotte 2024). However, no work has been done to investigate the phylogenetic relationships of this tribe (or subfamily–Disteniini or Disteniinae) and the limits with other genera belonging to it.

In the same way, the allocation of genera within Cerambycidae tribes is often quite problematic, especially in Lamiinae (Souza et al. 2020). This is because the concept of almost all tribes is very artificial and often does not hold up when characters are compared (Nascimento and Santos-Silva 2020). This has led some researchers to practically completely abandon the allocation into tribes and work only with genera (e.g. Ślipiński and Escalona 2013). We believe that this is not the solution to the problem, which cannot be solved by studying only genera from a certain region of the planet, even with the use of molecular studies. Souza et al.

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(2020) found many cases within their phylogenetic reconstruction of Lamiinae, which showed that further studies are still needed to help resolve the limits at the tribal level.

In this study we are describing three new species, transferring a genus from Acanthocinini for Desmiphorini, redescribing a species showing intraspecific variation, describing the unknown female of a species with a new state record, and providing notes on another species.

Materials and methods

Photographs were taken at MZSP with a Canon EOS TD Mark II camera, Canon MP-E 65 mm f/2.8 1–5× macro lens, controlled by Zerene Stacker AutoMontage software, except the photograph of *Elytrimitatrix* (*Grossifemora*) *lineatopora*, taken by Keita Matsumoto. Measurements were taken in "mm" using an ocular Hensoldt/Wetzlar - Mess 10 in the Leica MZ6 stereomicroscope, which was also used in the study of the specimens.

In examined material of known species, only specimens used to establish new records are listed; references on the known species are restricted to the original description and Monné (2023a, b, c).

The collection acronyms used in the text are as follows:

BMNH British Museum of Natural History, London, England

CIUM Colección de Insectos de la Universidad Autónoma del Estado de Morelos, CIByC, UAEM, Mexico.

FSCA Florida State Collection of Arthropods, Gainesville, Florida, USA

FWSC Frederick W. Skillman Collection, Phoenix, Arizona, USA

MZSP Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil

Results

Taxonomy

DISTENIIDAE Thomson, 1861

***Elytrimitatrix* (*Grossifemora*) Santos-Silva & Hovore, 2007**

***Elytrimitatrix* (*Grossifemora*) *pubescens* Santos-Silva & Hovore, 2008**

Figs 1–5, 11

Elytrimitatrix (*Grossifemora*) *pubescens* Santos-Silva & Hovore, 2008: 12; Monné 2023c: 233.

Material examined. MEXICO • Hidalgo: 3 km N Tlanchinol, 1 male, 2–3.VIII.1985, T.W. Taylor & P.H. Sullivan leg. (FWSC); Tlanchinol, 20.990938°N, -98.623388°W, 2 males, 17/Julio/2021, Bosque Mesófilo de Montaña, trampa de luz, O. Pérez-Flores leg. (CIUM).

Differential diagnosis. *Elytrimitatrix* (*Grossifemora*) *pubescens* is similar to *E.* (*G.*) *curoei* Santos-Silva & Le Tirant, 2016 (Fig. 10; see also photographs on Bezark 2023a and original description) but differs as follows: lateral tubercles of prothorax larger and more acute apically; elytral punctures sparser laterally and on posterior third; and femora stouter, especially meso- and metafemora (Fig. 5). In *E.* (*G.*) *curoei*, the lateral tubercles of the prothorax are smaller and less acute apically, elytral punctures more abundant throughout, and femora slender, especially meso- and metafemora (Fig. 10). *Elytrimitatrix* (*Grossifemora*) *pubescens* differs from *E.* (*G.*) *guatemalana* Santos-Silva & Hovore, 2008 (Fig. 6) and *E.* (*G.*) *hondurenha* Santos-Silva & Hovore, 2008 (Fig. 7) by the different elytral pubescent pattern and the elytral punctures sparser (more abundant in *E.* (*G.*) *guatemalana E.* (*G.*) *hondurenha*); from *E.* (*G.*) *irregularis* (Linsley, 1935) (Fig. 8) by the different elytral pubescent pattern and the elytral punctures sparser (more abundant in *E.* (*G.*) *irregularis*), but especially by the elytra without erect setae (present in *E.* (*G.*) *irregularis*); and from *E.* (*G.*) *lineatopora* (Bates, 1880) (Fig. 9), by the different elytral pubescent pattern and the elytral punctures sparser (more abundant in *E.* (*G.*) *lineatopora*), but especially by inner margin of the upper eye lobes widely rounded (narrowly rounded in *E.* (*G.*) *irregularis*).

The specimens examined are from the same area as the holotype (3 miles N Tlanchinol – near Tlanchinol in the specimens now examined). The specimen from FWSC differs from the holotype (Fig. 11) as follows: pronotal pubescence a little sparser and yellowish (denser and grayish in the holotype); basal antennomeres mostly orangish brown (dark brown in the holotype); elytral pubescence on light areas yellowish-white (grayish in the holotype); and the dark central area on the dorsal surface of elytra with elongate and isolated orangish-brown band centrally (this band not isolated in the holotype).

Redescription. Male. Head capsule black ventrally and laterally, reddish brown dorsally, more dark reddish brown on vertex, except black narrow area close to eyes; ventral mouthparts reddish brown, except yellowish-brown apex of palpomeres; antennae orangish brown, except somewhat dark-brown apex of scape and antennomeres III–V, dark reddish-brown apex of VI, reddish-brown apex of VII–X, and slightly reddish-brown ring after middle of XI. Prothorax blackish, except narrow dark reddish-brown close to anterior margin of pronotum, moderately narrow reddish-brown area of prothorax close to posterior margin, narrow reddish-brown area close to superior half of anterior margin of sides of prothorax, almost entire reddish-brown anterior third of prosternum, and reddish-brown lateral margins of prosternal process except yellowish-brown apex. Ventral surface of meso- and metathorax dark brown with irregular reddish-brown areas interspersed. Elytra orangish brown, punctures shiny black, gradually shiny dark brown toward apex, with large, complex dark area interspersed: dorsally shiny, subtriangular, blackish on anterior fifth, with oblique, moderately narrow and short projection on anterolateral region of subtriangular area and longitudinal, moderately narrow and short projection on posterolateral region of

Figures 1–11. *Elytrimitatrix* (*Grossifemora*) spp. **1–5.** *Elytrimitatrix* (*Grossifemora*) *pubescens* Santos-Silva & Hovore, 2008, male: **1.** Dorsal habitus; **2.** Ventral habitus; **3.** Lateral habitus; **4.** Head, frontal view; **5.** Meso- and metafemora. **6–9.** Elytral sculpturing: **6.** *E.* (*G.*) *guatemalana* Santos-Silva & Hovore, 2008, paratype male; **7.** *E.* (*G.*) *hondurenha* Santos-Silva & Hovore, 2008, paratype male; **8.** *E.* (*G.*) *irregularis* (Linsley, 1935), female; **9.** *E.* (*G.*) *lineatopora* (Bates, 1880), holotype female, by Keita Matsumoto (BMNH). **10.** *E.* (*G.*) *curoei* Santos-Silva & Le Tirant, 2016, meso- and metafemora. **11.** *Elytrimitatrix* (*Elytrimitatrix*) *pubescens* Santos-Silva & Hovore, 2008, holotype male, dorsal habitus.

subtriangular region, almost entirely opaque, dark brown on its remaining surface, longitudinal from apex of subtriangular area to near elytral apex, projected toward sides of dorsal surface about middle, forming wide and long area reaching anterior and posterior fifths, with orangish-brown band on its central region, obliquely inclined with rounded apex anteriorly, acutely narrowed apically, and projected toward epipleural margin before posterior third of elytra and following toward humerus as a narrow band, anteriorly widened, shiny, and blackish. Pro- and mesocoxa mostly dark reddish brown, mesocoxa with small yellow macula near trochanter; metacoxae orangish brown with irregular brownish areas; protrochanters yellow, with small reddish-brown area apically. Meso- and metatrochanters pale yellow with small brownish area apically. Basal quarter of profemora yellowish-brown (yellower depending on light intensity), basal third of mesofemora and about basal 2/5 of metafemora pale yellow (both yellower depending on light intensity); remaining surface of all femora dark brown, gradually darker toward apex. Tibiae blackish basally and apically, yellow on remaining surface, yellow area gradually lighter from protibiae to metatibiae. Tarsi reddish brown, slightly darkened on apex of tarsomeres I–II. Ventrites dark reddish brown, except dark-brown apex of ventrite 1, dark yellowish-brown apex of ventrite 2, light yellowish-brown area close to apex of ventrites 3–4, orangish-brown apex of ventrite 4, yellowish-brown macula on sides of ventrites 4–5, and central area of ventrites 4–5 with large purplish-red regions centrally.

Head. Frons narrow, sparsely, finely, shallowly punctate; glabrous centrally and moderately abundant, bristly yellowish-white pubescence laterally. Median groove well marked from posterior margin of frons to area between upper eye lobes. Vertex and area behind upper eye lobes with moderately abundant pale-yellow pubescence not obscuring integument, pubescence absent centrally from apex of median groove to prothoracic margin; with a few long, erect pale-yellow setae interspersed; area between antennal tubercles and posterior margin of upper eye lobes with a few coarse, shallow punctures; sides of vertex and area behind upper eye lobes sparsely, finely punctate; glabrous area of vertex smooth. Area behind lower eye lobes tumid close to eye, sparsely, finely punctate throughout; area close to upper eye lobe glabrous; remaining surface with sparse yellowish-white pubescence close to eye, glabrous on remaining surface; with long, erect yellowish-white setae interspersed on pubescent area. Genae with somewhat abundant yellowish pubescence close to eye, glabrous on apex. Antennal tubercles with abundant yellowish-white pubescence not obscuring integument, except glabrous apex. Gulamentum smooth, glabrous on posterior half; anterior half tumid, subsmooth, with sparse yellowish-white pubescence laterally, pubescence almost absent centrally except moderately abundant yellowish-white pubescence close and on intermaxillary process; with a few long, erect yellowish-white setae interspersed. Maxillary palpomere IV securiform. Postclypeus glabrous centrally and laterally, with abundant bristly yellowish-white pubescence not obscuring integument on remaining surface; with a few long, erect yellowish-white setae interspersed. Labrum with moderately sparse whitish pubescence on posterior half, pubescence absent on anterior half; with long, erect yellowish-brown setae interspersed posteriorly and laterally, erect setae longer laterally; anterior margin with fringe of yellowish-brown setae. Distance between upper eye lobes 0.22 times distance between outer margins of eyes; in ventral view, distance between lower eye lobes 0.53 times distance between outer margins of eyes; inner margin of upper eye lobes wide, rounded. Antennae 2.0 times elytral length, reaching elytral apex at apical seventh of antennomere VII. Scape slightly arched and widened basally, distinctly widened on apical 2/3; abundantly, finely punctate on basal third, punctures gradually sparser on apical 2/3 and distinctly sparser ventrally, except apex of dorsal surface with dense, short yellowish-white setae directed backward; with moderately sparse yellowish-white pubescence, slightly denser basally; with short, decumbent yellowish-white setae interspersed dorsally, and long, erect yellowish-white setae interspersed throughout. Pedicel with sparse yellowish-white pubescence and long, erect setae of same color interspersed laterally and ventrally. Antennomeres III–XI with yellowish-white pubescence not obscuring integument dorsally and laterally, pubescence gradually denser toward XI, sparser on apex of III–X; with abundant, short, subdecumbent yellowish-white setae interspersed, more abundant on outer surface; with a few long, erect yellowish-white setae interspersed dorsally and laterally on III and dorsal apex of IV–X; apex of III–X with short yellowish setae directed backward; ventral surface of III–VII with very long, decumbent dark yellowish-brown setae. Antennal formula (ratio) based on length of antennomere III: scape = 0.92; pedicel = 0.11; IV = 1.00; V = 0.97; VI = 0.97; VII = 0.94; VIII = 0.86; IX = 0.77; X = 0.65; XI = 0.78.

Thorax. Prothorax, including lateral tubercles, wider than long; lateral tubercles large, conical, subacute apically, located about middle; anterior and posterior constrictions wide, well-marked. Pronotum with five distinct tubercles, one on each side of anterior half close to anterior constriction, elevated, with rounded apex, one on each side of posterior half near posterior constriction, less elevated than anterolateral ones, with rounded apex, another elongated, located centrally from near anterior constriction to near posterior constriction; with abundant pale-yellow pubescence not obscuring integument, pubescence absent on central tubercle, anterolateral tubercles, and area between lateral tubercles, and almost absent close to anterior margin and sides of area close to posterior margin; with a few long, erect yellowish setae anterolaterally. Sides of prothorax with abundant pale-yellow pubescence not obscuring integument, except subglabrous anterior region, subglabrous area gradually widened toward prosternum. Posterior half of prosternum with abundant yellowish-white pubescence laterally and close to procoxal cavities, glabrous on remaining surface; anterior half with a few short, decumbent yellowish-white setae and long, erect setae of same color interspersed centrally. Prosternal process narrow, gradually narrowed from base to near apex, slightly widened apically; with abundant whitish pubescence centrally, with a few long, erect setae of same

color interspersed, glabrous laterally; narrowest area 0.12 times procoxal width; apical width 0.21 times procoxal width. Mesoventrite with moderately abundant yellowish-white pubescence not obscuring integument, pubescence absent on apex of sides; mesanepisterna and mesepimera with abundant yellowish-brown pubescence partially obscuring integument. Mesoventral process with abundant whitish pubescence not obscuring integument and a few long, erect setae of same color interspersed; apex strongly emarginate centrally; maximum width about as wide as mesocoxal width. Mesanepisterna and sides of metaventrite with abundant yellowish-brown pubescence partially obscuring integument; remaining surface of metaventrite with moderately sparse yellowish-white pubescence and a few long, erect setae of same color interspersed, except almost glabrous area on sides of metathoracic discrimen. Scutellum with dense pale-yellow pubescence.

Elytra. Sparsely, coarsely punctate, punctures aligned, gradually finer and sparser toward apex; with abundant yellowish-white pubescence not obscuring integument on orangish-brown areas and abundant dark yellowish-brown pubescence on remaining surface, pubescence on dark areas slightly sparser than on orangish-brown areas; without erect setae; apex rounded toward sutural angle.

Legs. Femora with sparse whitish pubescence on light basal region, and abundant yellowish pubescence not obscuring integument on remaining surface, yellowish pubescence sparser on ventral surface of profemora; ventral dark area with moderately short spines with blunt apex, spines shorter and sparser toward metafemora. Tibiae with sparse white pubescence, except ventral apex with yellowish-brown pubescence and dorsal apical third of mesotibiae with dense, short, erect yellow setae. Dorsal surface of tarsomeres with abundant yellowish-white pubescence not obscuring integument, and long, erect setae of same color interspersed; metatarsomere I as long as II–III together.

Abdomen. Ventrites with abundant yellowish-white pubescence not obscuring integument, except glabrous apex of ventrites 1–4. Apex of ventrite 5 slightly concave.

Dimensions (mm). Total length, 12.25–13.35; prothoracic length, 1.80–1.90; anterior prothoracic width, 1.60–1.65; posterior prothoracic width, 1.75–1.80; maximum prothoracic width, 2.50–2.60; humeral width, 2.80–2.95; elytral length, 9.60–9.75.

CERAMBYCIDAE Latreille, 1802
CERAMBYCINAE Latreille, 1802
ELAPHIDIINI Thomson, 1864
Psyrassa Pascoe, 1866

Psyrassa peninsularis sp. nov.

https://zoobank.org/27AEB97D-D62B-4EE6-9FFF-1796EA4BDF76

Figs 12–16

Type material. ***Holotype*** female from MEXICO • Quintana Roo: MX307, 12 km N Felipe Carillo Puerto, MV & UV light, 17.VI.2009, Skillman & Hildebrant leg. (FSCA, formerly FWSC).

Etymology. The specific epithet "peninsularis" is derived from "Yucatán peninsula," region where holotype was collected (Quintana Roo state).

Differential diagnosis. *Psyrassa peninsularis* sp. nov. is similar to *P. xestioides* (Bates, 1872), but differs as follows (females): body proportionally stouter; upper eye lobes with five rows of ommatidia; pronotal and elytral punctures more abundant and coarser (Fig. 12); and elytra slightly longer than 3.0 times prothoracic length. In *P. xestioides* (Fig. 17), the body is proportionally slender, upper eye lobes with six rows of ommatidia, pronotal and elytral punctures are sparser and finer, as pointed out by Bates (1872) ("thorace … sparsissime punctato [pronotum … very sparsely punctate];" "elytris … suprá sparsissime puncatis [elytra … very sparse punctate anteriorly]), and elytra distinctly longer than 3.0 times the prothoracic length. *Psyrassa peninsularis* sp. nov. also resembles *P. olegkozlovi* Santos-Silva, Botero & Taboada-Verona, 2017 (see photographs on Bezark 2023a and original description), but differs by the genal apex acute (rounded in *P. olegkozlovi*), elytral punctures distinctly sparser (denser in *P. olegkozlovi*), outer and sutural apical angles of elytra with long spine (with short triangular projection in *P. olegkozlovi*), and the pubescence on scutellum and sides of the ventral surface of the meso- and metathorax whitish (almost golden in *P. olegkozlovi*).

Description. Holotype female. Integument mostly black; ventral mouthparts reddish brown, except palpomeres brown with yellowish-brown apex; anteclypeus and labrum brown; antennae dark brown basally, gradually brown toward apex. Elytra and tibiae gradually dark brown toward apex. Tarsomeres dark brown. Apex of ventrites 1–4 brown; ventrite 5 brown basally, gradually light brown toward apex.

Head. Frontal plate smooth, glabrous; remaining surface of frons almost smooth centrally, abundantly, coarsely punctate laterally, glabrous centrally, with moderately sparse whitish pubescence laterally. Area between antennal tubercles sparsely, finely punctate; with moderately sparse whitish pubescence; with a few long, erect whitish setae near eyes; remaining surface of vertex sparsely finely punctate; with sparse whitish pubescence. Antennal tubercles sparsely punctate, with a few short, decumbent whitish setae basally, smooth, glabrous on remaining surface. Area behind eyes smooth on narrow area close to eye, abundantly, somewhat coarsely punctate on remaining surface behind upper eye lobe, smooth behind superior region of lower eye lobe, and abundantly, coarsely punctate on remaining surface behind lower eye lobe; with sparse, short, suberect brownish setae on punctate area behind upper eye lobe, glabrous on remaining surface. Genae with acute apex projected sideward; with anterior margin of lower eye lobe almost touching distal margin at middle; somewhat sparsely, finely punctate; with sparse yellowish-white pubescence and a few long, erect setae of same color interspersed. Maxillary palpomere IV and labial palpomere III securiform. Wide central area of postclypeus subsmooth, glabrous close to frons, except coarse puncture on each side with long, erect yellowish seta, somewhat sparsely, finely punctate,

Figures 12–17. *Psyrassa* spp. **12–16.** *Psyrassa peninsularis* sp. nov., holotype female: **12.** Dorsal habitus; **13.** Ventral habitus; **14.** Lateral habitus; **15.** Head, frontal view; **16.** Antennomeres III–VII. **17.** *Psyrassa xestioides* (Bates, 1872), female from Costa Rica (Limón, near Guapiles), dorsal habitus.

with sparse whitish pubescence close to anteclypeus. Sides of postclypeus smooth, glabrous. Labrum sparsely, finely punctate, except denser, coarser punctures near anterior margin; with sparser yellowish-white pubescence, except abundant, short yellowish-brown setae directed forward on coarse punctate region; with long, erect yellowish setae interspersed on posterior 2/3 and a few long, erect, thick yellowish-brown setae interspersed laterally. Gulamentum smooth, glabrous on posterior 2/3; transversely striate, with sparse whitish pubescence and long, erect brownish setae interspersed on anterior third; intermaxillary process smooth, glabrous, transversely depressed centrally. Outer surface of mandibles, densely, coarsely punctate, except smooth apical third, somewhat abruptly narrowed close to

smooth area; with sparse yellowish pubescence and long, erect, thick yellowish-brown setae interspersed on punctate area. Upper eye lobes with five rows of ommatidia; distance between upper eye lobes 0.40 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.57 times distance between outer margins of eyes. Antennae 1.15 times elytral length, almost reaching posterior quarter of elytra. Scape densely, coarsely punctate dorsally and laterally, except smooth apex; ventral surface sparsely, coarsely punctate; with sparse yellowish-white pubescence, except glabrous smooth apex; with a few long, erect yellowish setae interspersed on outer and ventral surfaces. Pedicel moderately sparsely, finely punctate; with sparse yellowish-white pubescence and long, erect yellowish setae interspersed, except smooth and glabrous apex. Antennomere III abundantly, coarsely punctate, except smooth apex; slightly, irregularly carinate dorsally; with sparse whitish pubescence, sparser ventrally, except glabrous smooth area; with a few long, erect yellowish setae interspersed. Antennomeres IV–X with abundant yellowish-white pubescence, denser from V; dorsally carinate, carina almost absent on X; ventral surface with long, erect yellowish setae, only apically from IX; dorsal surface with both, short and long, erect yellowish setae near apex. Antennomere XI constricted on apical quarter; with abundant yellowish-white pubescence, not obscuring integument, pubescence denser on apical quarter; with long, erect yellowish setae close to apical constriction. Inner apex of antennomere III with straight spine with acute apex, 2.4 times pedicel length (Fig. 15); inner apex of antennomere IV with slight arched spine with acute apex, 1.95 times pedicel length (Fig. 15); inner apex of antennomere V with straight spine with acute apex, 1.3 times pedicel length (Fig. 15); inner apex of antennomere VI with short spine with acute apex, 0.5 times pedicel length (Fig. 15); inner apex of antennomere VII with spicule (Fig. 15). Antennal formula (ratio) based on length of antennomere III (excluding spine): scape = 1.40; pedicel = 0.25; IV = 0.97; V = 1.11; VI = 1.14; VII = 1.22; VIII = 1.14; IX = 1.14; X = 1.11; XI = 1.53.

Thorax. Prothorax distinctly longer than wide; anterior and posterior constrictions well- marked; sides slightly divergent between constrictions. Pronotum moderately sparsely, coarsely punctate, punctures denser on wide central region and laterally close to anterior constriction, with fine punctures interspersed anterolaterally; with sparse, long, erect yellowish setae and small whitish pubescent macula on each side near posterior margin. Sides of prothorax mostly coarsely rugose-punctate; with sparse, long, erect yellowish setae, erect setae distinctly more abundant near anterior margin. Prosternum transversely depressed centrally; sparsely, coarsely punctate on posterior third, striate-punctate on posterior region of central depression, striate on anterior region of central depression, almost smooth on anterior third, except anterior sulcus with abundant punctures laterally and a few punctures centrally; with a few short, decumbent whitish setae, except glabrous striate area and area close to anterior margin, and abundant whitish pubescence close to procoxal cavities; with a few long, erect yellowish setae interspersed anteriorly and posteriorly. Prosternal process with abundant whitish pubescence centrally and sides of anterior 2/3, almost glabrous on remaining surface; narrowest area 0.36 times procoxal width. Procoxal cavities almost close posteriorly. Mesoventrite with sparse whitish pubescence, except dense whitish pubescence laterally and close to mesocoxal cavities. Mesanepisterna, mesepimera, and metanepisterna with dense whitish pubescence. Metaventrite with dense whitish pubescence laterally and a few, both short, decumbent whitish setae and long, erect yellowish setae. Scutellum with dense yellowish-white pubescence.

Elytra. Apex with long spine on outer and sutural angles, outer spine longer than sutural one; anterior half, abundantly, coarsely punctate; punctures gradually finer and sparser toward apex on posterior half; with sparse, long, erect yellowish-brown setae throughout.

Legs. Femora sparsely, finely punctate on basal third, abundantly, coarsely punctate on remaining surface, except smooth apices; apices with subtriangular projection with rounded apex; with sparse yellowish-white pubescence and long, erect yellowish setae interspersed. Tibiae longitudinally carinate laterally; abundantly, coarsely punctate, especially dorsally and laterally; protibiae with sparse, long, erect yellowish-brown setae dorsally and laterally, erect setae denser close to inner apex, and dense, bristly yellowish-brown pubescence ventrally; meso- and metatibiae with very sparse, short, suberect yellowish setae, and long, moderately abundantly yellowish setae interspersed, except apex of ventral surface with abundant, bristly yellowish-brown pubescence. Metatarsomere I shorter than II–III together.

Abdomen. Ventrites sparsely, finely punctate, except smooth apex of ventrites 1–4; sides with abundant yellowish-white pubescence; remaining surface with very sparse yellowish-white pubescence, except glabrous apex of ventrites 1–4, and long, erect yellowish setae interspersed. Apex of ventrite 5 subtruncate.

Dimensions in mm. Total length, 24.60; prothoracic length, 4.75; anterior prothoracic width, 3.20; posterior prothoracic width, 3.50; maximum prothoracic width, 4.05; humeral width, 4.90; elytral length, 16.20.

TROPIDINI Martins & Galileo, 2007
COMPSINA Martins & Galileo, 2007
***Neocompsa* Martins, 1965**

Neocompsa flavoquadripunctata Botero & Santos-Silva, 2022

Figs 18, 19

Neocompsa flavoquadripunctata Botero & Santos-Silva, 2022: 6; Monné 2023a: 569 (cat.)

Material examined. MEXICO • Zacatecas (**new state record**): 1974 m, 2.4 km E San Lorenzo, 21°57'54"N, 103°12'19"W, 2 females, 17.VII.2017, R. Cunningham & G. Nogueira leg. (MZSP).

Remarks. This species was described based on a single male (see photographs on Bezark 2023a and original

Figures 18, 19. *Neocompsa Neocompsa flavoquadripunctata* Botero & Santos-Silva, 2022, female from Mexico (Zacatecas, near San Lorenzo): **18.** Dorsal habitus; **19.** Ventral habitus.

description) from Mexico (Jalisco). The females differ from males by the antennae distinctly shorter, slightly surpassing elytra apex (surpassing the elytral apex at apical third of the antennomere VI in males), antennomeres III–VI not widened (distinctly widened in males). The holotype male has four small yellowish-brown elytral maculae on the dorsal surface, two on the anterior half and two on the posterior half. The two females examined have the two anterior and posterior longitudinal maculae are fused by an oblique band, the anterior oblique band is paler than the maculae in one female.

LAMIINAE Latreille, 1825
ACANTHOCININI Blanchard, 1845
Nealcidion Monné, 1977

Nealcidion bruchi (Melzer, 1934)

Alcidion bruchi Melzer, 1934: 230.

Nealcidion bruchi; Monné, 1977: 700; 2023b: 138 (cat.).

Remarks. Melzer (1934) described *A. bruchi* based on two specimens from Argentina (Chaco and Misiones). According to him (translated): "Type at the collection of Mr. C. Bruch; cotype at my collection." The private collection of Carlos Bruch is current at the Museum Argentino de Ciencias Naturales "Bernardino Rivadavia," and the private collection of Julius Melzer is currently deposited at MZSP. However, the paratype (cotype) is not present at MZSP. According to Monné (2023) and Tavakilian and Chevillotte (2023) the holotype is the specimen from Argentinean province of Chaco. However, Melzer (1934) did not provide this information. Therefore, as the paratype was not found, only the examination of the labels of the holotype may provide this information. Although Melzer (1934) did not inform the sex of the two specimens in the text of the description, at least one of them, the specimen illustrated, is a male; this information is present in the legend of the figure: "*Alcidion Bruchi* n. sp. [symbol of male]." Tavakilian and Chevillotte (2023) record the work in which Julius Melzer described *Alcidion bruchi* as having been pub-

lished in 1935. However, there is no evidence of this in the magazine. Therefore, the correct year, which appears in the magazine, is 1934.

Pseudastylopsis Dillon, 1956

Pseudastylopsis skillmani sp. nov.

https://zoobank.org/D8766B9B-6DAE-4FC2-8F1F-4F0F150470A1

Figs 20–24

Type material. ***Holotype*** female from GUATEMALA • Baja Verapaz: 1 km SE of Purulhá, at lights, 17–19. VI.2001, W.B. Warner leg. (FSCA, formerly FWSC).

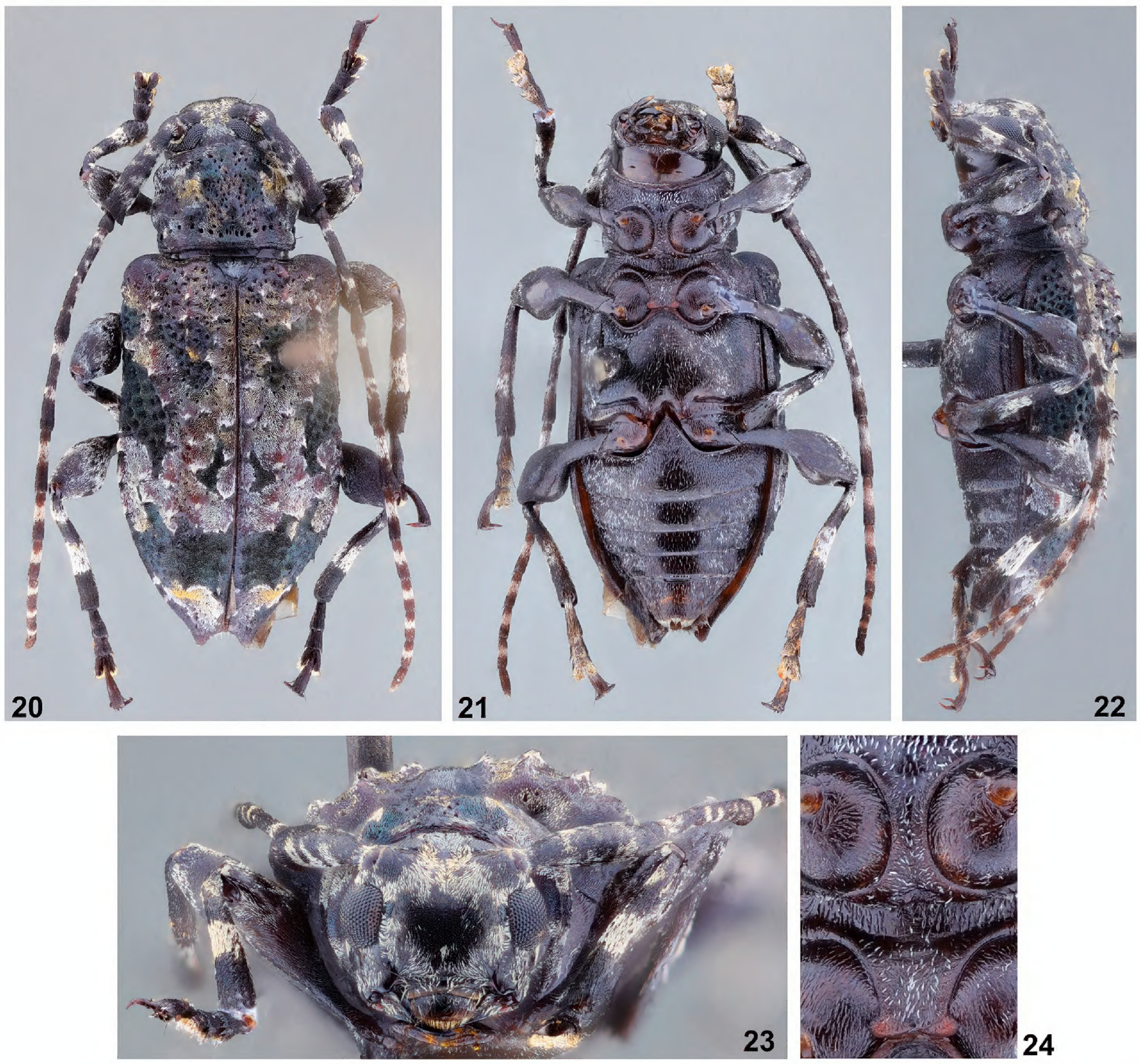
Etymology. The new species is dedicated to Frederick W. Skillman, who provided us most of the specimens for this study.

Differential diagnosis. *Pseudastylopsis skillmani* sp. nov. is similar to *P. alba* Pérez-Flores & Santos-Silva, 2021 (see photographs on Bezark 2023 and original description), but differs as follows: pronotal and elytral pubescence sparser and forming different pattern; elytral apex obliquely truncate with outer angle distinctly projected. In *P. alba*, the pronotal and elytral pubescence is distinctly denser, and elytral apex truncate without projection on outer angle. The new species also differs from all other species of the genus by the design formed by the elytral pubescence and the shape of the elytral apex (truncated or rounded and external angle not projected in other species).

Description. Holotype male. Integument mostly black; ventral surface of head dark brown, gradually, slightly lighter toward prothorax; ventral mouthparts brown, except palpomeres black with apices of maxillary palpomere IV and labial palpomere III dark yellowish-brown; anterior half of anteclypeus light brown; anterior third of labrum dark brown; antennomeres VI–X dark brown with dark orangish-brown central ring; antennomere XI dark brown. Base of trochanters dark yellowish-brown.

Head. Frons abundantly, very finely punctate; frons with abundant whitish pubescence partially obscuring integument on some areas, pubescence apparently lost on large central area, except small area with dark pubescence close to eyes; with on long, erect dark-brown seta close to eyes. Area between antennal tubercles with dense yellowish pubescence, except glabrous central area close to upper eye lobes; anterior area between upper eye lobes with abundant whitish pubescence not obscuring integument, and on long, erect brown seta close to eyes; remaining surface of vertex with moderately sparse dark pubescence. Area behind eyes with moderately sparse dark pubescence close to eyes, with whitish pubescence interspersed behind lower eye lobes, glabrous close to prothorax; with one long, erect dark-brown seta close to upper eye lobe. Genae slightly longer than lower eye lobe; with abundant whitish pubescence not obscuring integument, except very sparse darkish pubescence frontolaterally on superior half close to eye, glabrous apex, and glabrous area close to frons and clypeus; with a few long, erect brown setae interspersed. Wide central area of postclypeus with abundant whitish pubescence not obscuring integument close to frons, except glabrous central region, and sparse, bristly whitish pubescence close to anteclypeus; with long, erect brown setae interspersed. Sides of postclypeus glabrous. Labrum with abundant dark pubescence not obscuring integument on posterior quarter and entire sides, with whitish pubescence interspersed, glabrous on remaining surface, except anterior margin with dense fringe of yellowish-brown setae; with long, erect brown setae interspersed on pubescent region. Gulamentum smooth, glabrous; intermaxillary process with moderately sparse whitish pubescence and long, erect dark-brown setae interspersed. Antennal tubercles with dark pubescence not obscuring integument, except sides of frontal region with abundant whitish pubescence. Distance between upper eye lobes 0.21 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.60 times distance between outer margins of eyes. Antennae 1.6 times elytral length, reaching elytral apex at apical sixth of antennomere VIII. Scape with inner apex projected, forming acute angle when viewed in dorsal view; ventral surface with abundant whitish pubescence not obscuring integument; dorsal and lateral surfaces with abundant blackish pubescence not obscuring integument and irregular whitish pubescent maculae interspersed. Pedicel with abundant dark-brown pubescence not obscuring integument, except whitish pubescence basally on outer and ventral surfaces. Antennomere III with abundant blackish pubescence not obscuring integument; dorsal and lateral surfaces with irregular whitish pubescent maculae; ventral surface with whitish pubescence interspersed. Antennomeres IV with dense whitish pubescent ring close to base and another whitish pubescent ring about middle; remaining surface with abundant blackish pubescence not obscuring integument. Antennomeres V–X with dense whitish pubescent ring about middle; remaining surface with abundant dark-brown pubescence partially obscuring integument. Antennomere XI with dense dark-brown pubescence partially obscuring integument. Antennal formula based on length of antennomere III: scape = 0.92; pedicel = 0.13; IV = 0.78; V = 0.54; VI = 0.46; VII = 0.40; VIII = 0.37; IX = 0.33; X = 0.31; XI = 0.33.

Thorax. Prothorax wider than long; anterior constriction narrow, well-marked; sides with rounded projection close to anterior constriction and another rounded projection, slightly more protruding than anterior one, from about middle to posterior quarter. Pronotum with five slightly elevated tubercles, one subconical on each side of anterior third, one distinctly rounded dorsally on each side after middle, less elevated and more distant between then than anterolateral ones, another elongated located centrally from middle to posterior quarter; moderately abundantly, coarsely punctate between lateral tubercles, except smooth central tubercle, sparsely, coarsely punctate on anterior quarter, punctures slightly coarser than on central region, very sparsely, coarsely punctate on sides



Figures 20–24. *Pseudastylopsis skillmani* sp. nov., holotype male: **20.** Dorsal habitus; **21.** Ventral habitus; **22.** Lateral habitus; **23.** Head, frontal view; **24.** Prosternal and mesoventral processes.

of central region, with sinuous row of coarse punctures on posterior quarter, punctures distinctly coarser and deeper than the other punctures, and row following toward lateral surface of prothorax, and area close to posterior margin without punctures, with narrow transverse sulcus; area close to sides of anterolateral tubercles with large, irregular yellow pubescent macula; area between lateral tubercles with abundant, thick yellowish pubescence not obscuring integument; sides and area on each side of center close to anterior margin with large, irregular white pubescent maculae, and remaining surface mostly with brownish and dark-brown pubescence not obscuring integument; sides of posterior half with a few long, erect dark-brown setae. Sides of prothorax with abundant dark-brown pubescence not obscuring integument and irregular white pubescent maculae interspersed. Prosternum with abundant, both dark and white pubescence not obscuring integument laterally, and abundant, thick white pubescence centrally not obscuring integument. Prosternal process with white pubescence centrally not obscuring integument and abundant brownish pubescence laterally not obscuring integument, brownish pubescence shorter than white pubescence; narrowest area 0.28 times procoxal width. Mesoventrite with abundant dark pubescence not obscuring integument and a few short, decumbent white setae interspersed, especially laterally. Mesanepisterna with abundant dark pubescence not obscuring integument and white pubescence interspersed close to mesoventrite and superiorly close to elytra; mesepimera with abundant dark pubescence not obscuring integument and white pubescence interspersed close to elytra. Mesoventral process (Fig. 24) with white pubescence not obscuring integument, pubescence thicker and more abundant centrally; sides convergent from base to rounded apical projection; narrowest area 0.61 times mesocoxal width. Metanepisterna and sides of metaventrite with abundant dark pubescence not obscuring integument, and a few short, decumbent white setae interspersed; remaining surface of

metaventrite with abundant, both dark and white pubescence not obscuring integument, except glabrous center of posterior half. Scutellum with abundant whitish pubescence not obscuring integument centrally, and abundant dark pubescence not obscuring integument laterally, dark pubescence shorter than white pubescence.

Elytra. Subparallel-sided from humeri to middle, slightly widened centrally, then distinctly narrowed toward apex; apex oblique, with outer angle forming distinct projection with rounded apex; with moderately sparse, small tubercles dorsally and a few small tubercles on sides of posterior half; humeral carina well-marked, reaching posterior fifth of elytra; anterior quarter with three distinct carinae dorsally and remaining surface with two somewhat irregular carina not reaching apex; basal half of dorsal surface moderately abundantly, coarsely punctate, except sides of area between anterior quarter and middle densely, very coarsely punctate; remaining dorsal surface sparsely, finely punctate, punctures finer and sparser toward apex; area between epipleural margin and humeral carina on anterior half densely, very coarsely punctate and remaining surface sparsely, finely punctate; nearly all small tubercles on anterior 3/4 with dense tuft of white pubescence anteriorly and tuft of blackish pubescence apically; dorsal surface of anterior 3/4 with complex pubescence design not covering area with very coarse punctures, large, irregular area on anterior third, and small, somewhat irregular area near suture after middle of elytra, pubescence on this area mostly yellowish on its anterior 2/3, more pale yellow on some areas, and mostly white on its posterior third; posterior sixth with oblique pubescent macula not reaching apex, from epipleural margin to suture, widened toward suture, pubescence white with large, transverse, irregular yellow pubescent band interspersed anteriorly on dorsal surface; remaining surface with abundant greenish-brown pubescence not obscuring integument, pubescence more dark yellowish-brown on some areas depending on light intensity and source, except yellow pubescent tuft on anterior third of dorsal surface.

Legs. Femora pedunculate-clavate; with abundant dark pubescence on peduncle and abundant white pubescence interspersed on clubs, white pubescence denser dorsally. Tibiae with two dense white pubescent rings, on basally, another about middle; remaining surface with abundant dark partially obscuring integument, dark pubescence denser and bristly on posterior half of ventral surface of protibiae and posterior third of ventral surface of meso- and metatibiae, and on dorsal sulcus of mesotibiae. Tarsomeres with abundant dark pubescence dorsally partially obscuring integument; metatarsomere I shorter than II–III together.

Abdomen. Ventrites 1–4 with abundant, both white and dark pubescence laterally, not obscuring integument, and sparse, both dark and white pubescence centrally, except center of anterior half of ventrite 1 with abundant dark pubescence and glabrous central apex. Ventrite 5 with moderately sparse dark pubescence and white pubescence interspersed on basal half; apex notched centrally.

Dimensions (mm). Total length, 8.05; prothoracic length, 1.50; anterior prothoracic width, 1.70; posterior prothoracic width, 2.00; maximum prothoracic width, 2.20; humeral width, 3.15; elytral length, 5.75.

DESMIPHORINI Thomson, 1860

Alphinellus Bates, 1881

Figs 25–28

Alphinellus Bates, 1881: 153; Monné 2023b: 12 (cat.).

Material examined. *Alphinellus minimus* – MEXICO • Campeche (**new state record**): Hwy. 261, 5 km N Hopelchén, beating in burn, 1 female, 13.VI.2005, F.W. Skillman Jr. leg. (FWSC). GUATEMALA (**new country record**), Suchitepéquez: Los Tarrales Nature Reserve, Patulul, at UV and metal halide lights, 1 male, 26.VIII.2008, C.W. & L.B. O'Brien & Fred Skillman leg. (MZSP).

Alphinellus carinipennis – MEXICO • 1 specimen, former J. Flohr collection, no more data (MZSP).

Remarks. Bates (1881) described *Alphinellus* as follows (translated): "Body small, oblong, convex. Head very concave between antennae. Antennae filiform, slightly longer than body, nor ciliated, scape short, gradually widened just from base, slightly sinuous below, apex subacute; antennomere III twice as long as scape, IV slightly shorter, V–XI shorter. Thorax [prothorax] subquadrate, dorsally [pronotum] anteriorly very gibbose, the sides a little before posterior margin sharply spinosus or obtusely protruding [lateral tubercles of prothorax]. Elytra subcylindrical, distinctly sloping posteriorly, very shortly truncate apically, dorsally with three longitudinal carinae and bicostate toward sides [inner longitudinal carina divided into three short carinae and outermost longitudinal carina divided into two short carinae]. Legs short, femora clavate; metatarsomere I triangular. Prosternal process narrow, coxae globose, protruding; procoxal cavities closed laterally [It is not clear to us whether he was actually describing the side of the procoxal cavities or the posterior region. However, in both cases the cavities are closed]." Still according to him: "The form of the scape is unlike that of any other genus of Acanthocinini, approaching nearest that of *Alphus*."

Separation between some tribes of Lamiinae is practically impossible. However, true Acanthocinini have a notably elongated scape. This feature alone allows excluding *Alphinellus* from Acanthocinini. Among the American tribes of Lamiinae, based on the tarsal claws divaricate and scape proportionally short, *Alphinellus* is better included in Desmiphorini or Acanthoderini. Again, separation between some genera of these two tribes is problematic. However, as the typical genera of Acanthoderini have the scape clavate, we think that *Alphinellus* agrees better with Desmiphorini. Although some genera currently included in Desmiphorini have distinctly long scape, the scape in *Alphinellus* is similar to that in many genera of this tribe,

Figures 25–28. *Alphinellus minimus* Bates, 1881, male from Guatemala: **25.** Dorsal habitus; **26.** Ventral habitus; **27.** Lateral habitus; **28.** Head, frontal view.

as for example, in *Parablabicentrus* Dalens, Touroult & Tavakilian, 2009. Therefore, we are transferring this genus from Acanthocinini to Desmiphorini.

Although the definition of Acanthocinini by Linsley and Chemsak (1995) is problematic for part of genera not occurring in North America, the description of the length of the scape agrees well with the other American Acanthocinini: "scape elongate, slender …" Linsley and Chemsak (1984) considered Estolini as distinct from Desmiphorini. However, the features used by him to separate these two tribes from Acanthocinini are not reliable when genera of Desmiphorini from Central and South Americas are considered.

Lacordaire (1872) separated Desmiphorini from Acanthocinini and Acanthoderini by the shape of the mesocoxal cavities: closed in the two later; open in the former. However, the mesocoxal cavities are not different in these three tribes. Therefore, the key and definition of these tribes in Lacordaire (1872) is not reliable.

In his key to tribes of Lamiinae from the Iberian region, Vives (2000) also separated Acanthocinini from Desmiphorini by the shape of the mesocoxal cavities: closed in Acanthocinini; open in Desmiphorini. However, even in the type genus of Desmiphorini, *Desmiphora* Audinet-Serville, 1835, the procoxal cavities are equal to that in Acanthocinini.

Villiers (1980) separated Desmiphorini (listed as Estolini) from Acanthocinini in his alternative of couplet "10:" Scape bulged, shorter than the pronotum, leading to Desmiphorini; scape gradually widened from base to apex, longer than the pronotum, leading to Acanthocinini. Although the scape in Acanthocinini is variable and may or may not to be longer than the prothorax, it is always distinctly elongated. However, there are genera in Desmiphorini also with elongate scape, making the key not useful. It is interesting to report that Villiers (1980) considered correctly the shape of the mesocoxal cavities equal in these two tribes. Furthermore, in the redescription of Acanthocinini he reported, partially contradicting his key (translated): "scape very long, often longer than the pronotum."

Therefore, although it is not possible to separate the genera of Acanthocinini and Desmiphorini based on the length of the scape, it is possible to exclude the genera with proportionally short scape from Acanthocinini. It

is possible that genera of Desmiphorini with long scape belong to Acanthocinini. Despite these problems, we consider that, in light of current knowledge, if the length of the scape is excluded as a basic feature of Acanthocinini, there will be no morphological features left capable of maintaining the stability of the tribe. In fact, it seems to us that it is Desmiphorini that is in a somewhat chaotic situation, due to the absence of stable morphological features, and not Acanthocinini. This is when Acanthocinini is compared with Desmiphorini and not with some other tribes of Lamiinae such as, for example, Colobotheini.

Alphinellus is not the only American genus wrongly included in Acanthocinini (see *Eugamandus* Fisher, 1926). However, it would be necessary to examine the species of this genus to allocate it correctly (it is possible that its species belong to more than one tribe).

Currently, *Alphinellus* includes four species (Monné 2023b; Tavakilian and Chevillotte 2023):

1. *A. carinipennis* Bates, 1885 (see photographs in Monné et al. 2020), known from Mexico (Veracruz);
2. *A. gibbicollis* Bates, 1881 (see photographs on Bezark 2023), type species, known from Guatemala (Sacatepéquez);
3. *A. minimus* Bates, 1881 (Figs 25–28), known from Mexico (Quintana Roo) and Guatemala (Escuintla);
4. *A. subcornutus* Bates, 1881 (see photographs on Bezark 2023), known from Guatemala (Alta Verapaz), Honduras (Atlántida), and Costa Rica.

HEMILOPHINI Thomson, 1868
Eranina Monné, 2005

Eranina amaura sp. nov.

https://zoobank.org/1C21E944-8A13-45DB-A4BE-542619475544

Figs 29–33

Type material. ***Holotype*** female from GUATEMALA • Baja Verapaz: Pantin to Salamanca road, 15°14.57'N, 90°16.98'W, day, sweeping, beating & gleaning, 7.X.2007, W.B. Warner leg. (FSCA, formerly FWSC).

Etymology. The specific epithet "amaura" is derived from the Greek *amauros* (dark, dim, obscure), alluding to the general coloration of the species.

Differential diagnosis. *Eranina amaura* sp. nov. is similar to *E. pectoralis* (Bates, 1881) and *E. pusilla* (Bates, 1874) (it is possible that these two last species are synonyms), but differs by: head mostly black; scape reaching about middle of pronotum; metanepisterna, mesepimera, and metanepisterna mostly with abundant dark-brown pubescence; meso- and metafemora mostly black; tibiae black basally. In *E. pectoralis* (Figs 38, 39) and *E. pusilla*, the head is mostly orangish, scape distinctly surpassing middle of pronotum, metanepisterna, mesepimera, and metanepisterna have dense whitish or yellowish pubescence, meso- and metafemora yellowish or orangish, and tibiae yellowish or orangish basally. *Eranina amaura* sp. nov. differs from *E. florula* (Bates, 1881) (Figs 34, 35) by the dense light pubescence on the pronotum not reaching the posterior margin centrally (reaching in *E. florula*), and sides of metanepisterna, mesepimera, and metanepisterna without dense white pubescence (present in *E. florula*). The new species is also similar to *E. sororcula* Galileo & Martins, 2013 (Figs 40, 41) but differs (females) by the body slender (distinctly stouter in *E. sororcula*), dense yellowish pubescence on the pronotum not reaching the posterior margin centrally (reaching in *E. sororcula*), dark area on the posterior region of the pronotum reaching the middle (not reaching in *E. sororcula*), and elytra dark brown (brown or light brown in *E. sororcula*), and tarsomeres V dark (orangish in *E. sororcula*); also differs from *E. leuconoe* (Bates, 1881) (Figs 36, 37) by the metanepisterna, mesepimera, and metanepisterna mostly with abundant dark-brown pubescence (dense white pubescence in *E. leuconoe*), and by the elytral apex rounded (truncate, with outer angle slightly projected in *E. leuconoe*).

Description. Holotype female. Head black, except brownish anterior margin of postclypeus, entire anteclypeus, and mostly of anterior third of labrum, brown central area of vertex, brown large area behind upper eye lobes; ventral mouthparts brown except blackish maxillary palpomeres IV and labial palpomeres III; scape, pedicel, basal third and apical region of antennomere III, and apex of antennomeres IV–VI black; remaining basal half of III reddish brown and remaining posterior half orangish brown; remaining surface of IV–VI orangish brown; base of VII reddish brown and remaining surface blackish; VIII–XI blackish. Prothorax light brown, except two large black maculae on posterior half, fused close to posterior margin of pronotum, rounded on their anterior margin on pronotum, gradually narrowed on sides of prothorax, two small, irregular blackish maculae on each side close to anterior margin of pronotum, and blackish on postcoxal process, prosternum and prosternal process. Ventral surface of meso- and metathorax black. Scutellum and elytra dark brown except dark orangish brown epipleural margin. Trochanters orangish brown. Profemora dark orangish brown, except dark brown dorsal surface of apical third; meso- and metafemora black, except brown base and dark orangish-brown apical sides of mesotibiae. Protibiae dark brown except reddish brown basal 2/3 of sides and basal third of ventral surface (more dark orangish brown depending on light intensity); meso- and metatibiae blackish. Tarsi black except dark brown pro- and mesotarsomeres V, brown metatarsomere V, and reddish-brown tarsal claws, more orangish brown toward their apices. Ventrites 1–4 with triangular black area centrally, gradually narrowed toward ventrite 4, not reaching its apex, covering entire ventrite 1 blackish; remaining surface of ventrites 1–4 orangish brown; ventrite 5 black basally, gradually dark brown toward apex, except subtriangular orangish brown macula on each side of basal half.

Figures 29–33. *Eranina amaura* sp. nov., holotype female: **29.** Dorsal habitus; **30.** Ventral habitus; **31.** Lateral habitus; **32.** Head, frontal view; **33.** Elytral apices.

Head. Frons moderately sparsely, coarsely punctate, punctures slightly denser laterally; with abundant whitish pubescence not obscuring integument between eyes, pubescence slightly sparser and brownish centrally, almost glabrous close to postclypeus and posterocentrally; with a few long, erect yellowish-white setae on sides. Vertex moderately sparsely, coarsely punctate; central area with abundant pale-yellow pubescence anteriorly, denser posteriorly; remaining surface with abundant brownish pubescence not obscuring integument, pubescence bristly anteriorly; with long, erect yellowish-white setae interspersed. Area behind upper eye lobes moderately abundantly,

coarsely punctate; with abundant brown pubescence not obscuring integument. Area behind lower eye lobes moderately sparsely, coarsely punctate, punctures gradually sparser toward ventral surface; superior region and area of connection between lobes with large, dense yellowish-white pubescence; remaining surface with sparse brownish pubescence, pubescence abundant close to yellowish-white pubescence, gradually sparser toward ventral surface. Genae 0.7 times as long as lower eye lobe; with sparse whitish pubescence on superior half, glabrous on inferior half. Postclypeus sparsely, coarsely punctate, except smooth central area and sides; with a few minute, whitish setae close to frons, sparse, decumbent brownish setae close to anteclypeus, and one long, erect, thick yellowish seta on each side of central region. Labrum coplanar with anteclypeus on posterior third, inclined on anterior 2/3; smooth close to anteclypeus, abundantly, coarsely punctate on beginning of inclined area, smooth on remaining surface; glabrous close to anteclypeus and anteriorly, with moderately abundantly, erect, thick yellowish-brown setae on punctate area. Antennal tubercles sparsely, minutely punctate; with abundant whitish pubescence frontally, with sparse brownish pubescence on remaining surface, except almost glabrous basal region of central surface. Area of connection between eye lobes very narrow, without ommatidia centrally; distance between upper eye lobes 0.31 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.60 times distance between outer margins of eyes. Antennae 1.8 times elytral length, reaching elytral apex near apex of antennomere VII. Scape abundantly, finely rugose-punctate except smooth apex; with abundant whitish pubescence not obscuring integument laterally, sparser and bristly ventrally, brownish dorsally, except glabrous apex; with long, erect, sparse whitish setae interspersed ventrally and posterior third of dorsal surface. Pedicel with moderately sparse, both whitish and brown pubescence not obscuring integument, and long, erect whitish setae interspersed. Basal half of antennomere III with sparse, both dark-brown and white bristly pubescence; apical half with a few bristly white setae and abundant, short, erect dark-brown setae on outer surface; with long, erect dark brown setae interspersed, erect setae longer and more abundant ventrally. Antennomere IV with a few short, bristly white setae and abundant, short, erect dark-brown setae on outer surface; erect setae as on III. Antennomeres V–XI with short, bristly dark brown setae, denser from VI; with short, bristly white setae interspersed throughout; V–VI with a few long, erect dark-brown setae interspersed ventrally and dorsal apex. Antennal formula based on length of antennomere III: scape = 0.63; pedicel = 0.09; IV = 0.86; V = 0.50; VI = 0.39; VII = 0.32; VIII = 0.27; IX = 0.26; X = 0.23; XI = 0.25.

Thorax. Prothorax wider than long; sides slightly divergent from anterolateral angles to posterior third, then convergent toward posterolateral angles; sides of posterior third forming slightly rounded protuberance. Pronotum with dense pubescence on light area, pubescence yellowish white laterally, yellowish centrally, except subglabrous area close to anterior margin; dark area with abundant brown pubescence not obscuring integument, pubescence slightly conspicuous depending on viewing angle, bristly laterally; with long, erect whitish setae interspersed on light area. Sides of prothorax with dense yellowish-white pubescence on light area and abundant brown pubescence on dark area not obscuring integument; with long, erect yellowish-white setae interspersed on light area. Prosternum with sparse dark-brown pubescence. Prosternal process with abundant whitish pubescence not obscuring integument, pubescence appearing to be darker depending on light intensity; narrowest area 0.1 times procoxal width. Ventral surface of mesothorax abundantly, coarsely punctate; with moderately sparse brownish pubescence on wide central area of mesoventrite, abundant, mostly brownish pubescence on sides of mesoventrite, mesanepisterna, and mesepimera (pubescence appearing to be lighter depending on light source). Mesoventral process about as wide as prosternal process (damaged in the holotype). Metanepisterna and sides of metaventrite abundantly, coarsely punctate, with abundant dark-brown pubescence partially obscuring integument; remaining surface of metaventrite moderately abundantly, minutely punctate, with abundant yellowish-white pubescence not obscuring integument, except glabrous metathoracic discrimen. Scutellum with sparse brown pubescence, with minute yellowish-white setae interspersed, except apex with abundant yellowish-white pubescence.

Elytra. Abundantly, coarsely punctate, punctures slightly finer toward apex; with abundant fulvous pubescence not obscuring integument, except whitish pubescence close to suture and epipleural margin; with long, erect brown setae interspersed; apex rounded.

Legs. Pro- and mesofemora with very sparse yellowish-white pubescence dorsally and laterally and abundant, bristly pubescence ventrally; metafemora with sparse brownish pubescence dorsally, abundant, both brownish and whitish pubescence on sides, and abundant, bristly whitish pubescence ventrally. Protibiae with sparse whitish pubescence dorsally and laterally, abundant, bristly whitish pubescence on basal half of ventral surface, and abundant, bristly yellowish-brown pubescence on apical half of ventral surface; with sparse, long, erect brownish setae interspersed dorsally and laterally. Mesotibiae glabrous basally, with moderately sparse brownish pubescence on remaining dorsal and inner surfaces, except apex with abundant yellowish pubescence, dense, bristly yellowish-brown pubescence on remaining outer surface, and abundant, bristly brownish pubescence ventrally; with long, erect brownish setae interspersed dorsally and laterally. Metatibiae glabrous basally, with abundant brown pubescence on remaining surface, except apical quarter of sides and ventral surface with abundant, bristly yellowish-brown pubescence; with long, erect brownish setae interspersed. Dorsal surface of pro- and mesotarsi with abundant whitish pubescence not obscuring integument; dorsal surface of metatarsi with abundant, both whitish and brownish pubescence not obscuring

Figures 34–41. *Eranina* spp. **34, 35.** *Eranina florula* (Bates, 1881), female from Guatemala (Izabal, Bobos): **34.** Dorsal habitus; **35.** Lateral habitus. **36, 37.** *Eranina leuconoe* (Bates, 1881), female from Costa Rica (Limón, 4 km NE Bribri): **36.** Dorsal habitus; **37.** Lateral habitus. **38, 39.** *Eranina pectoralis* (Bates, 1881), female from Mexico (Veracruz, Lake Catemaco): **38.)** Dorsal habitus; **39.** Lateral habitus. **40, 41.** *Eranina sororcula* Galileo & Martins, 2013, paratype female from El Salvador (Cuscatlán, Rasario): **40.** Dorsal habitus; **41.** Lateral habitus.

integument, pubescence sparser on tarsomere V. Metatarsomere I about as long as II–III together.

Abdomen. Ventrites with abundant yellowish-white pubescence not obscuring integument; apex of ventrite 5 truncate, widely, slightly concave centrally.

Dimensions (mm). Total length, 7.25; prothoracic length, 1.40; anterior prothoracic width, 1.65; posterior prothoracic width, 1.55; maximum prothoracic width, 1.80; humeral width, 2.10; elytral length, 5.15.

Discussion

The incredible diversity of the Cerambycid fauna in the Neotropical Region has been reported by several authors (e.g. John A. Chemsak, Earle Gorton Linsley, Miguel A. Monné, Antonio Santos-Silva) as one of their number remains little known. In fact, in recent decades the number of species has increased considerably, highlighting a considerable lack of knowledge about species and genera of these beetles in the Neotropical Region. Not to mention that little is known about their evolutionary relationships or biogeographic history, and the controversy regarding both their higher and lower level taxonomy.

Currently, more than 9,000 species are known in the Neotropical Region, with about 5,000 recorded in Central America and Mexico (Bezark 2023; Monné 2023a, b, c). Interestingly, some South America cerambycid species also occur in Central and North America (Bezark 2023; Monné 2023a, b, c). Also, several genera are distributed throughout almost all of America (e.g. *Anelaphus* Linsley, 1936, *Urgleptes* Dillon, 1956, *Eupogonius* LeConte, 1852) (Monné 2023a, b).

Species richness and morphological diversity are ones of the reasons for the systematic problems, most of them on tribal classification level; This is mainly due to fragility or artificiality of some characters proposed to classify genera within tribes (Ślipiński and Escalona 2013; Souza et al. 2020). Even so, some features are useful to delimit tribes in Cerambycidae, as, for example, the shape of the eyes and size of ommatidia, shape of the scape and procoxae, whether the procoxal cavities are open or closed laterally and behind, shape of the tarsal claws (Linsley 1962; Linsley and Chemsak 1984; Švácha and Lawrence 2014). These listed features in most cases are sufficient to delimit tribes and allocate genera within them. However, nowadays there are still genera that are not properly classified within tribes.

On the other hand, Disteniidae is a smaller family, with just over 410 species distributed throughout the world, of which approximately half are distributed in America (Pérez-Flores et al. 2022). This group has a very conspicuous morphology, but there are no studies on its evolutionary and biogeographic history. Herein we report the chromatic variation, which is commonly reported in this family (Botero and Santos-Silva 2020, 2021), as well as in Cerambycidae. These variations have been attributed to feeding substrates or associated to temperature range (Cavaletto et al. 2021). However, those assumptions are not a general explanation for all groups, as these hypotheses have been more commonly proposed for diurnal beetles.

Švácha and Lawrence (2014) also mentioned aposematic or mimicry as a defense response (e.g. *Tetraopes* Dalman, 1817), which occasionally results in chromatic polymorphisms. These polymorphisms are often represented by darker or lighter specimens in the same area. Thus, chromatic variation in Cerambycidae and Disteniidae is possibly related to other environment factors. However, research on this topic is needed to understand high (or low) chromatic variation and, therefore, the biology of these beetles.

Author Contribution

Species identifications were made by all authors. New species description, writing of the first draft of the manuscript, pictures, and drawings were made by ASS. All authors commented on previous versions of the manuscript, read and approved the final version.

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